BookletChart™

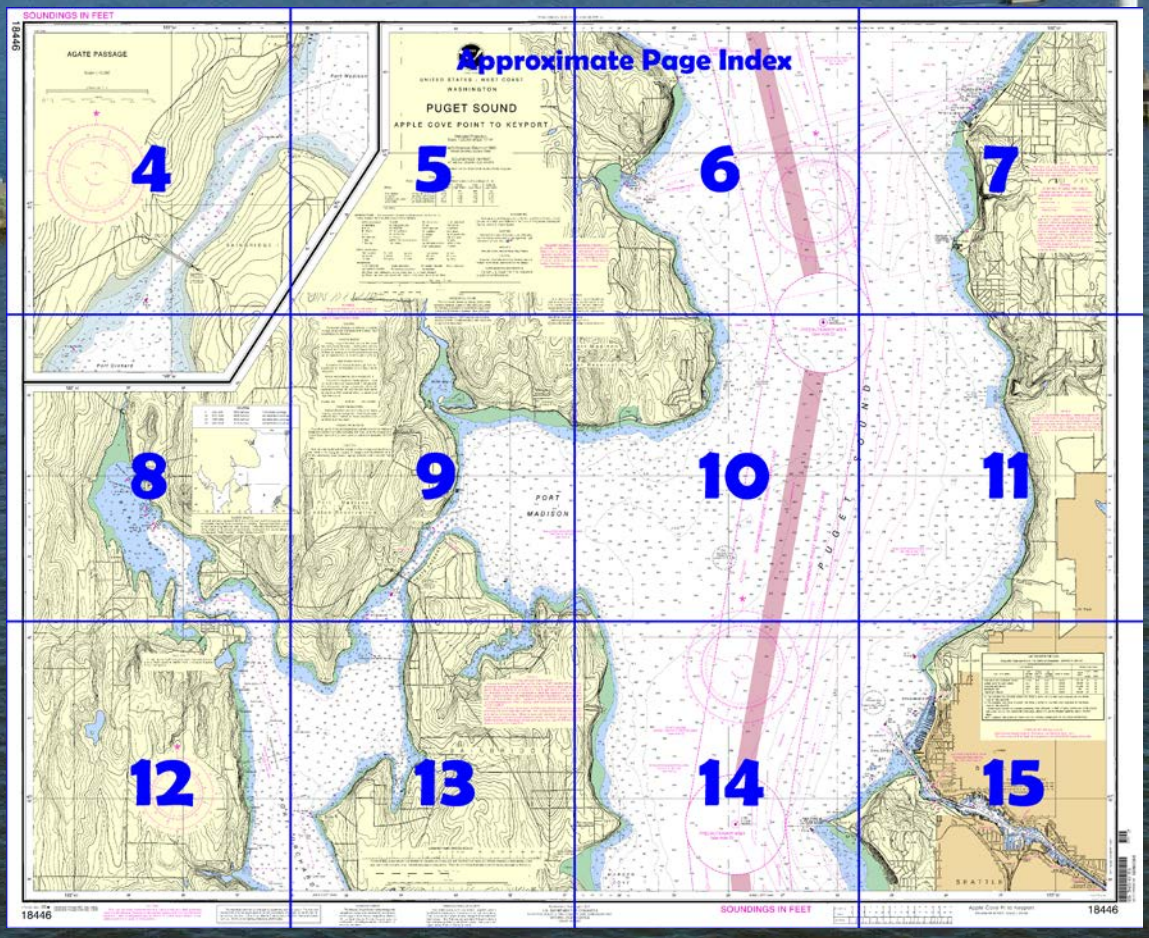
Puget Sound –
Apple Cove Point to Keyport

NOAA Chart 18446

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18446

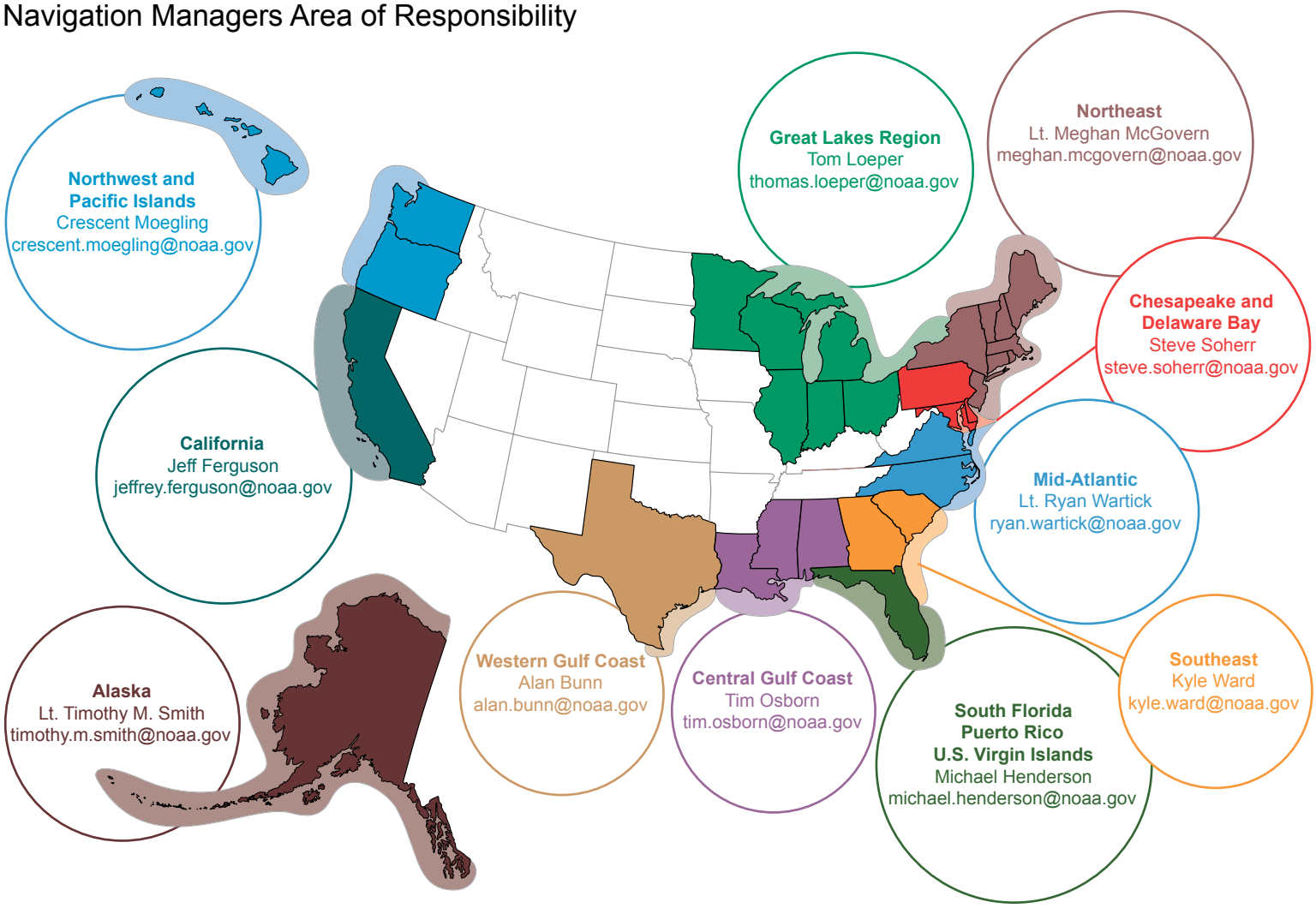
(Selected Excerpts from Coast Pilot)
Agate Passage is the N entrance to Port Orchard and connects it with Port Madison. The channel extends about 1 mile in a SW direction. The depth is about 20 feet. The passage is straight; the shores are wooded and fairly steep-to; the shoreline is rocky and fringed with kelp to Point Bolin. The currents have velocities up to 6 knots; the flood sets SW and the ebb NE. The passage is partially obstructed by a shoal near the middle of the N end with depths of 9 to 10 feet, and there are other depths of 14 to 18 feet almost in midchannel.

The N entrance is marked by a light on the W side of the channel opposite **Agate Point**; a lighted buoy marks the channel through the passage and a light marks a shoal NE of **Point Bolin**.
A fixed highway bridge, 0.7 mile S of Agate Point, has a clearance of 75 feet for a midwidth of 300 feet. Overhead power cables cross the passage on both sides of the bridge; least clearance is 96 feet.
Liberty Bay is a narrow inlet extending about 4 miles in a N direction from the NW part of Port Orchard. The SE half of the bay is narrow and tortuous. The shores are low and wooded; the shoreline is mostly sand and gravel. There are mud flats at the head of the bay and in the small bight on the S side of the bay. Mud is the predominating bottom characteristic. The current velocity is 0.8 knot N of Keyport, in the narrow entrance to the bay. Velocities exceeding 1 knot occur at times.
The Keyport Naval Undersea Warfare Center (NUWC) is on the W side of the entrance to Liberty Bay. A seaplane float extends 100 feet NW from the end of the pier and mariners are requested not to exceed 3 knots when passing it. Several buildings are prominent at the station.
A **torpedo test area** extends off the shore between Brownsville and Keyport NUWK. Flashing red lights on Navy range vessels between Keyport and Brownsville and atop a building at the seaward end of the southern building at Keyport NUWK indicate torpedo firings, or that noise measurement tests are in progress, or that conditions are generally hazardous to mariners. When lights are flashing, mariners should not enter the test area. Mariners near the area should stop engines, or other equipment generating underwater noise, such as depth sounders, because some torpedoes are guided by noise and may be attracted to the boat noises. (See **334.1230**, chapter 2, for limits and regulations of the restricted area.)
Keyport is on the S side of the passage leading to Liberty Bay. A power cable with a clearance of 90 feet crosses the passage at Keyport. There are two piers with floats that can accommodate about 42 small craft. A store with gasoline pumps is about a half block from the Keyport launching ramp. A marine railway that can handle craft to 42 feet is available for repairs; a 7-ton hoist is also available. Engine and hull repairs and salvage and towing services are available at Keyport.
Poulsbo, a fishing and pleasure resort on the E shore at the head of Liberty Bay, is the principal town of the area. The small-craft harbor at Poulsbo, protected on the S and W sides by an angled timbered breakwater, can accommodate about 400 fishing boats and pleasure craft. The breakwater is well marked by private lights. Piers and floats are in the harbor with reported depths of 7 feet alongside. Supplies and services available at the harbor are: electricity, gasoline, diesel fuel, water, a pump-out facility and electrical/engine repairs. A float with the edges painted yellow is on the NE side of the harbor and has been reserved as a seaplane dock. A yacht club and marina are about 0.4 and 0.6 mile SSE of the small-craft harbor, respectively. Supplies of all types may be obtained in town.
Manzanita is a settlement on the W side of Bainbridge Island in a small cove about 2 miles S from Agate Passage. **Manzanita Bay**, S of the town, affords an excellent anchorage for small craft in 27 feet, mud bottom. There are several private wharves, buoys and floats in the bay. Caution is urged to avoid rows of submerged piling on each side of the bay, about midway in from the entrance.
Battle Point, a sandy spit on the E side of Port Orchard about 1.7 miles S of Point Bolin, marks the turn in the direction of the channel from SW to S. A light is off the end of the spit.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Seattle	Commander 13th CG District Seattle, WA	(206) 220-7001

Navigation Managers Area of Responsibility

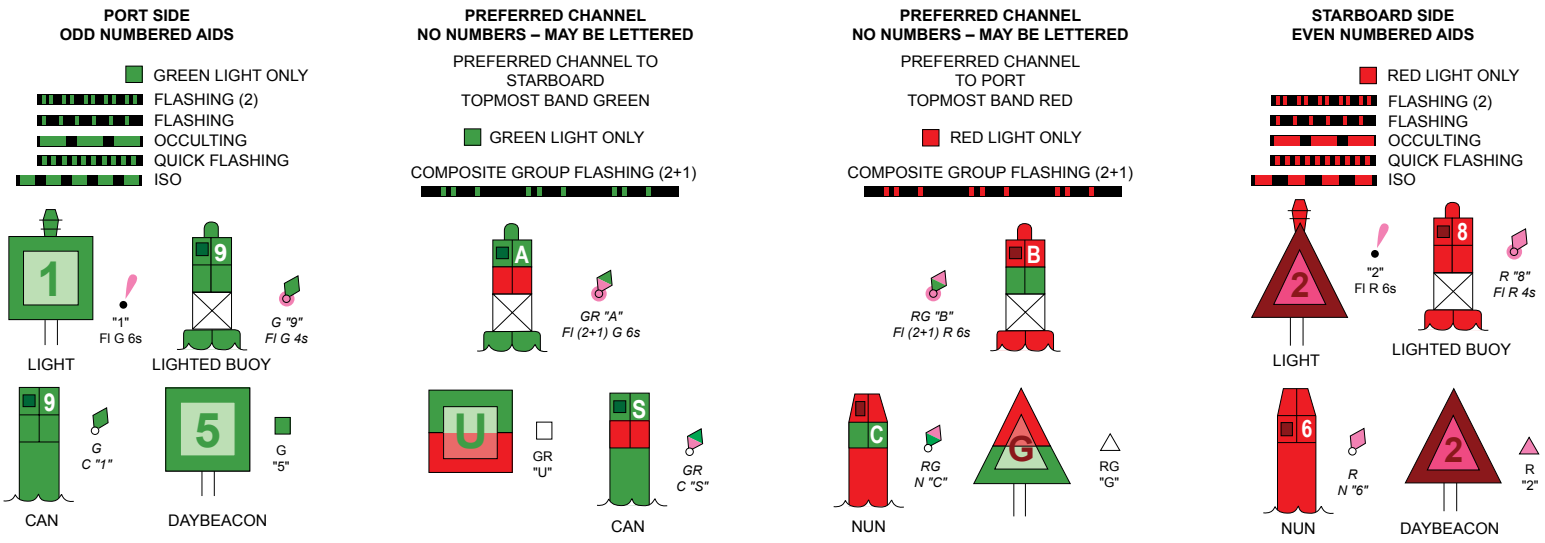


NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

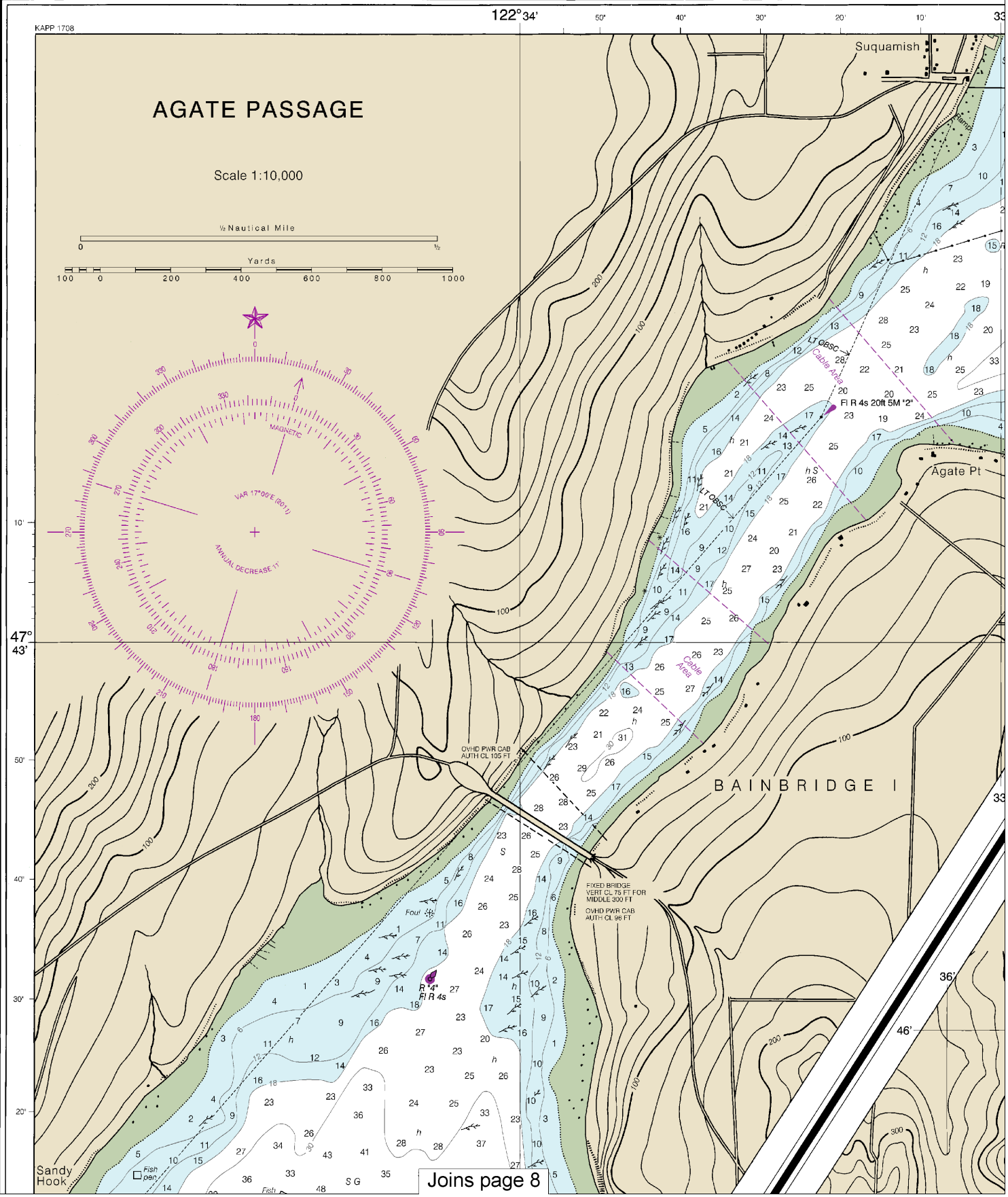
Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at *http://www.navcen.uscg.gov*

SOUNDINGS IN FEET



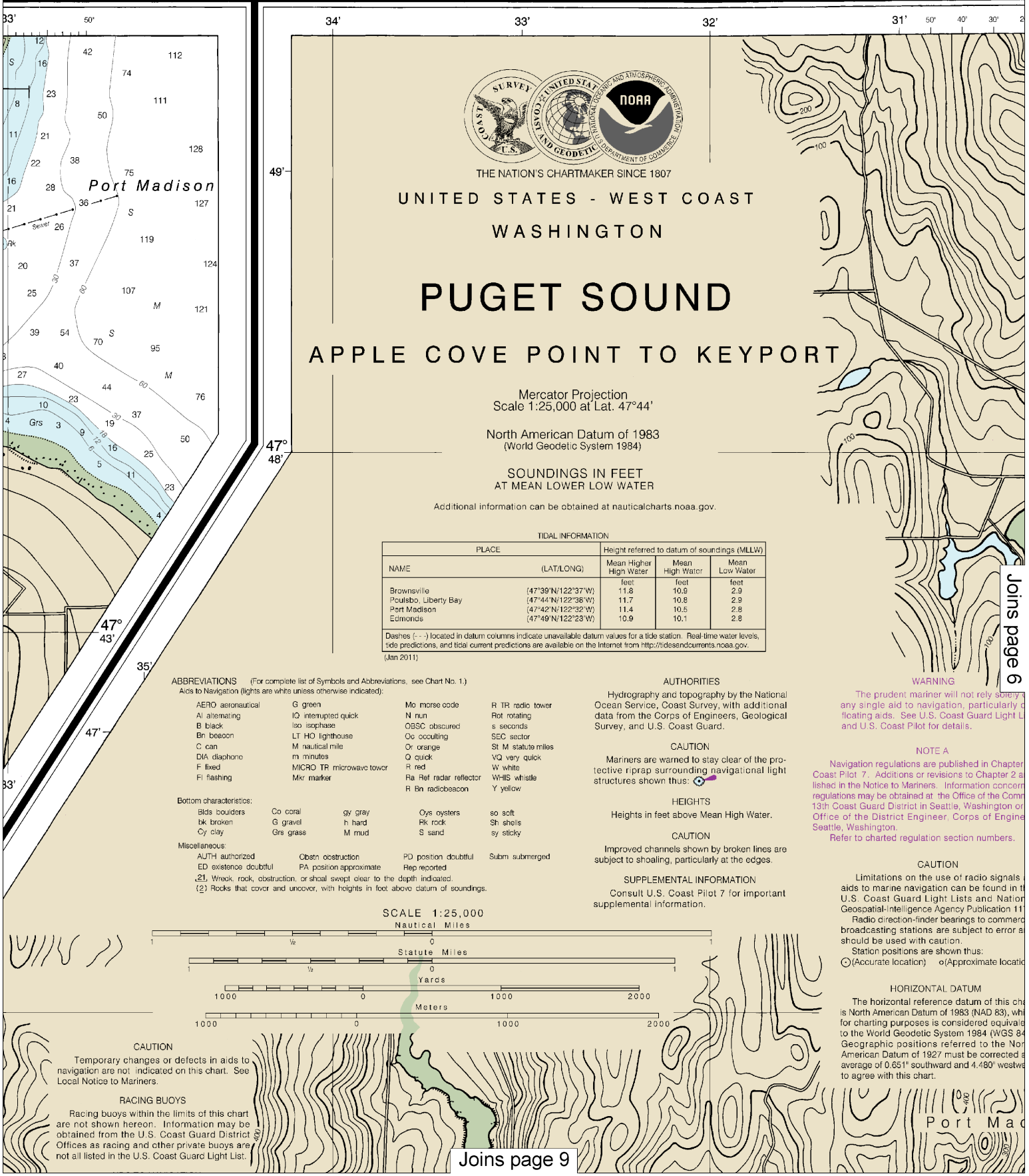
4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

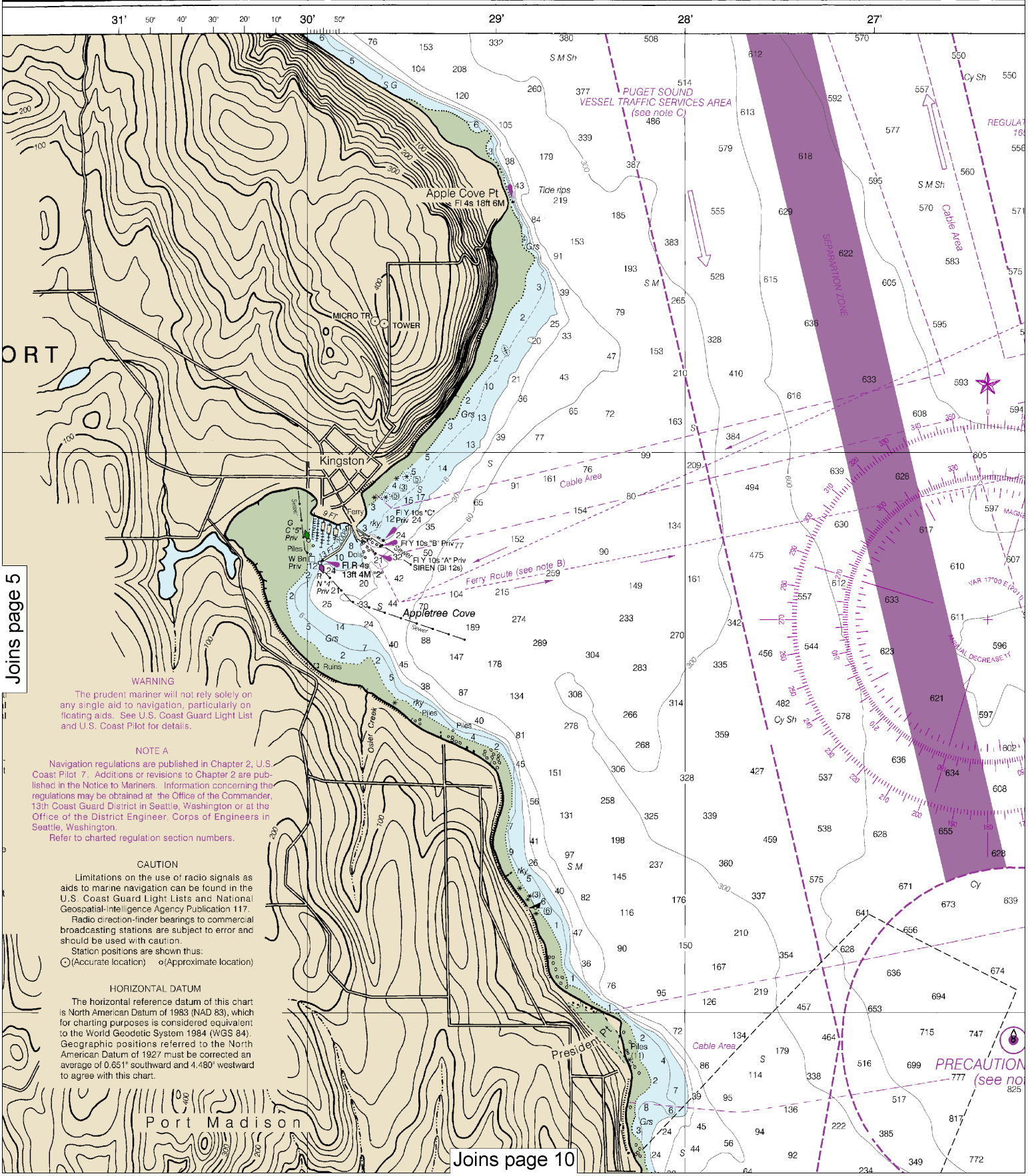
Nautical Miles
1 ½ 0 1
Yards
1000 0 1000 2000

Formerly C&GS 6445, 1st Ed., Oct. 1947 C-1947-699 KAPP 17



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:33333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

Formerly C&GS 6445, 1st Ed., Oct. 1947 C-1947-699 KAPP 1707



WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.

Refer to charted regulation section numbers.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

HORIZONTAL DATUM

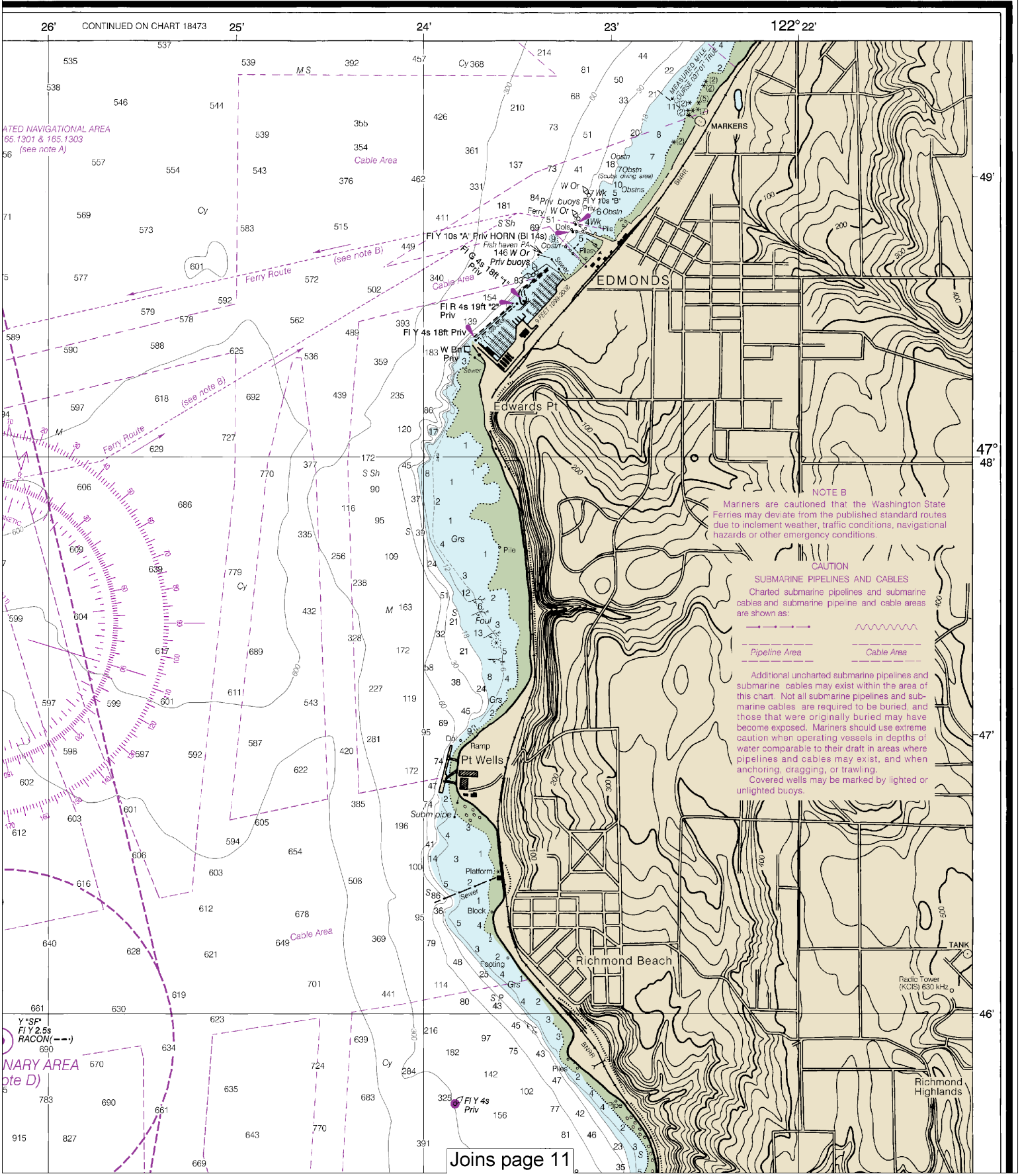
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.651" southward and 4.480" westward to agree with this chart.

Note: Chart grid lines are aligned with true north.

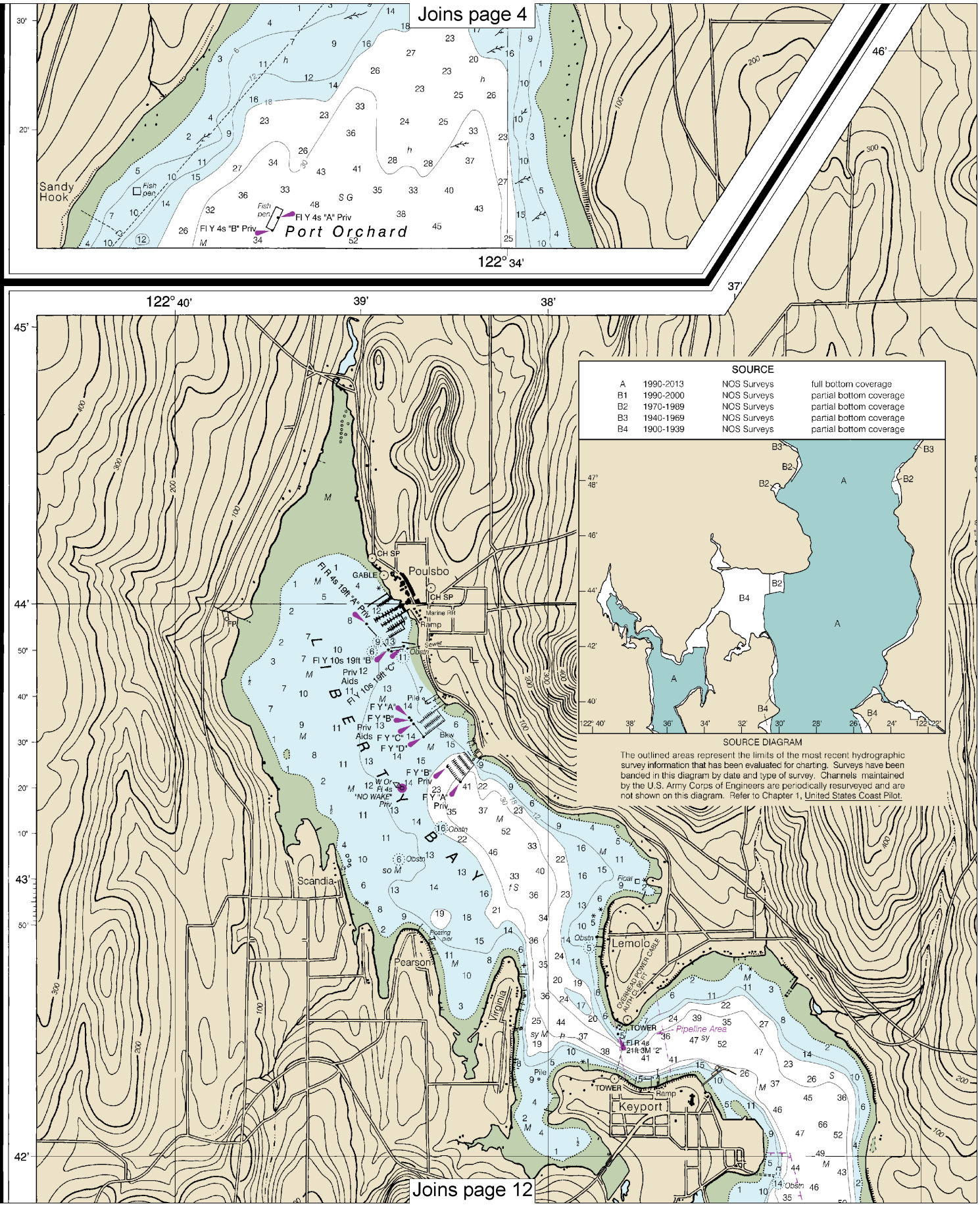
Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000



18th Ed., Mar. 2011. Last Correction: 10/26/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)
nauticalcharts.noaa.gov



8

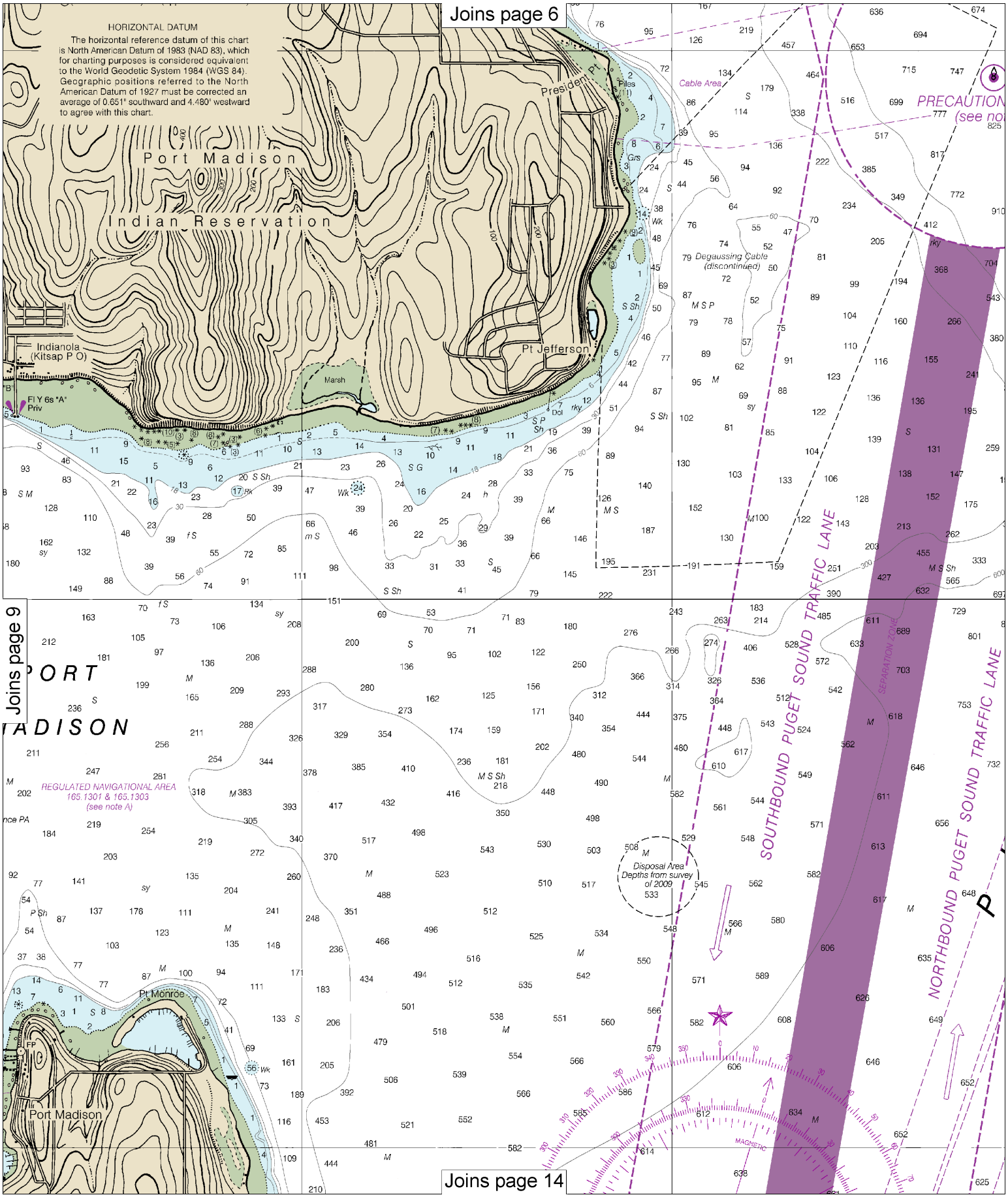
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles: 1 ½ 0 1

Yards: 1000 0 1000 2000


Joins page 5
Yards
Meters
CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.
AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.
Seattle, WA KHB-60 162.550 MHz
RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.
POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).
CAUTION
Mariners are cautioned that a large number of logs and deadheads are adrift in the navigable waters of Oregon and Washington at all times, particularly after stroms, spring freshets, and unusually high tides.
HORIZONTAL DATUM
The horizontal reference datum of this cha
is North American Datum of 1983 (NAD 83), whi
for charting purposes is considered equivale
to the World Geodetic System 1984 (WGS 84
Geographic positions referred to the Nor
American Datum of 1927 must be corrected a
average of 0.651" southward and 4.480" westwa
to agree with this chart.
Port Mad
Indian Rese
Miller Bay
Log Storage
Dols
5 ft rep 2002
Ramp
Pile
Indianola
(Kitsap P O)
Fl Y 6s "B" Priv
Fl Y 6s "A" Priv
LT OBSC
Suquamish
Port Madison
Indian Reservation
PORT
MADISON
Joins page 10
Fl R 4s 20ft 5M "2"
Agate Pt
Cable Area
AGATE PASSAGE
REGULATED NAVIGATIONAL AREA
165.1301 & 165.1303
(see note A)
Unexploded ordnance PA
Rep (2007)
OVHD PWR CAB
AUTH CL 105 FT
FIXED BRIDGE
VERT CL 75 FT FOR
MIDDLE 300 FT
OVHD PWR CAB
AUTH CL 95 FT
(see inset)
Fl R "4"
Fl R 4s
Fl 4s Priv
Obstn
Pt Monroe
Flagpole
Fish pen
Fl Y 4s "A"
Fl Y 4s "B" Priv
Sandy Hook
Seabold
Subm piles
Treasure
Port Madison
Fl R 2.5s 15ft 4M "6"
Joins page 13

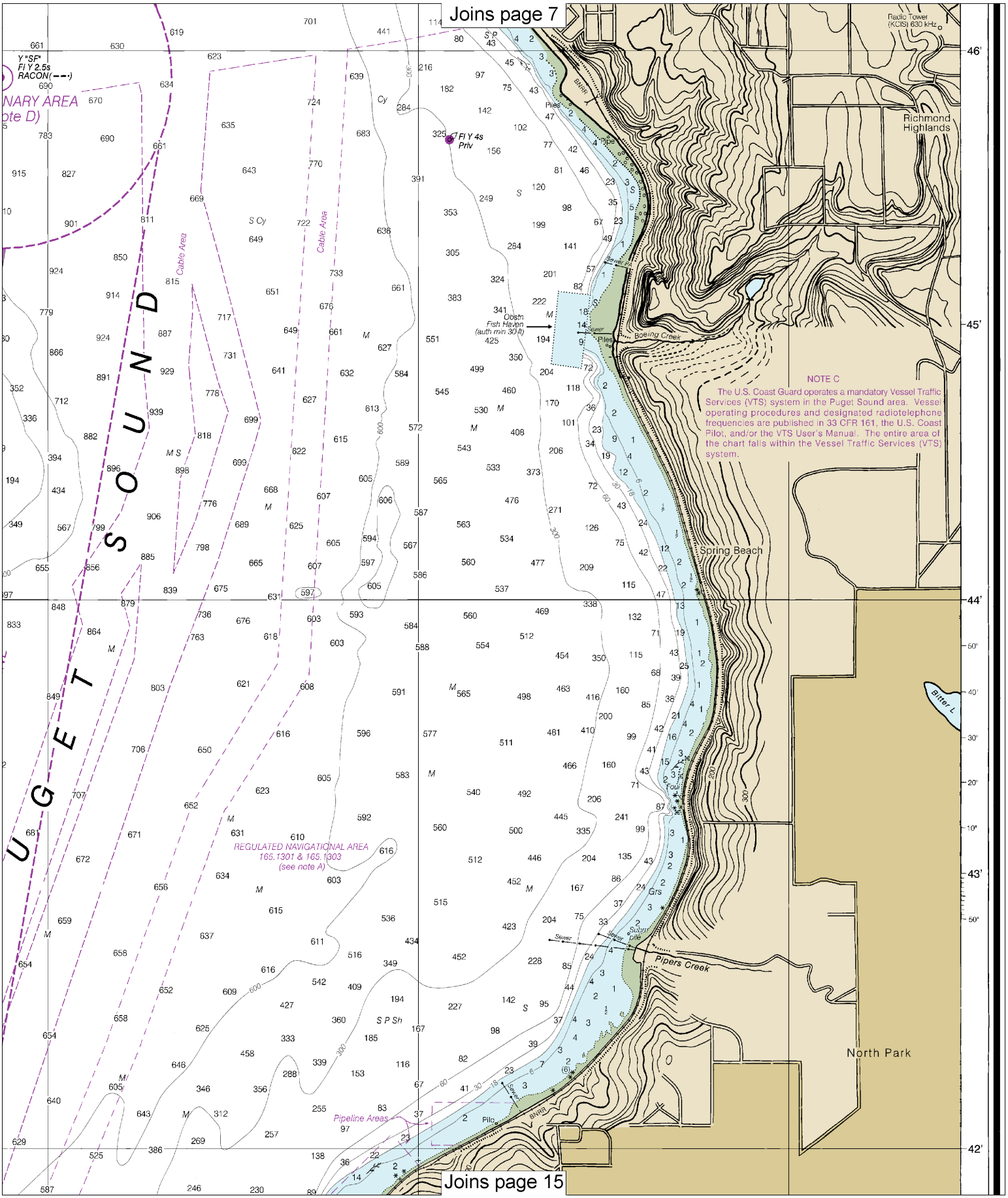


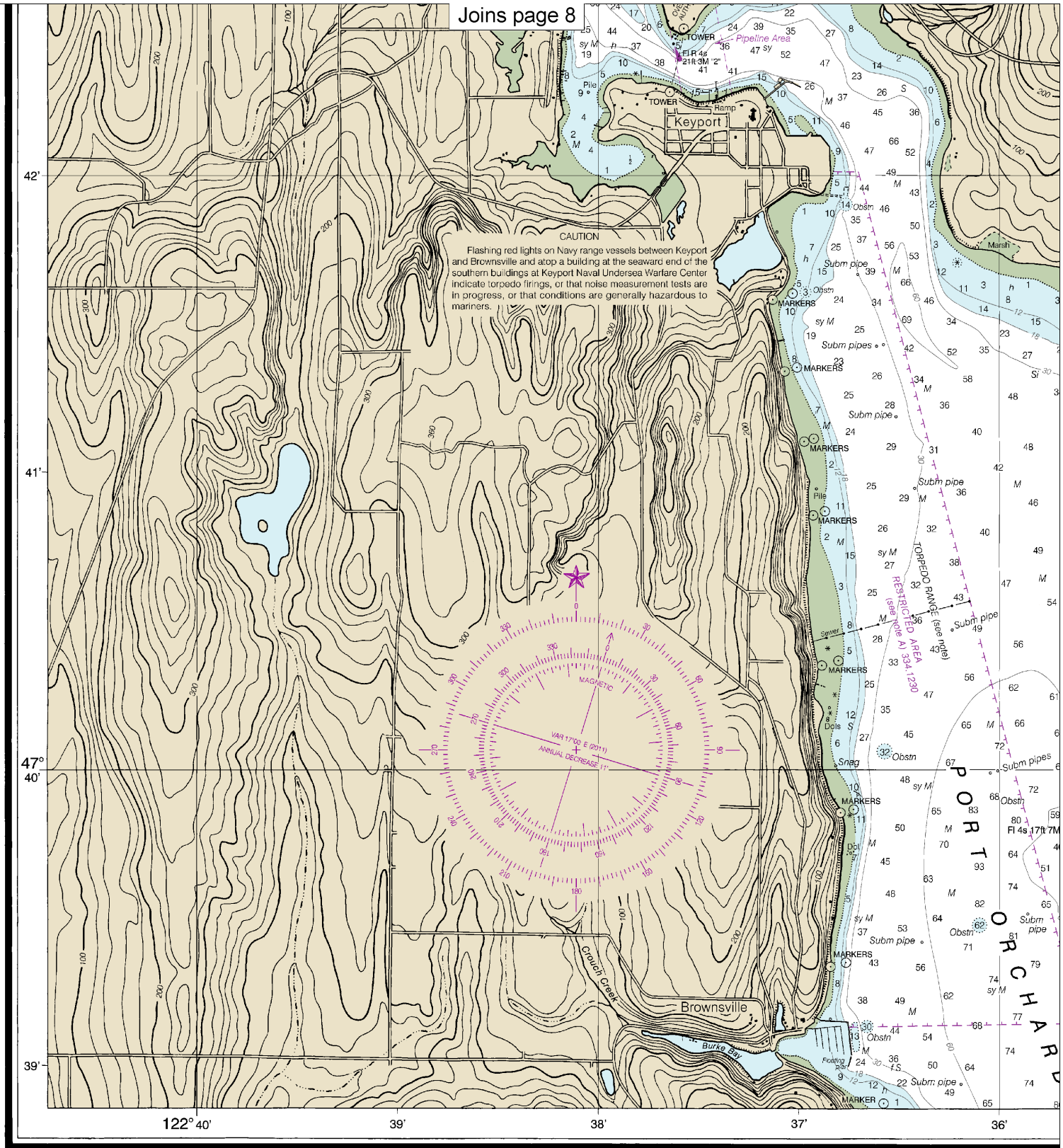
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000


Joins page 7
Joins page 15
Richmond Highlands
Spring Beach
North Park
Boeing Creek
Pipers Creek
Blitter L
Radio Tower (KCTS) 630 kHz
NOTE C
The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the Puget Sound area. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. The entire area of the chart falls within the Vessel Traffic Services (VTS) system.
REGULATED NAVIGATIONAL AREA
165.1301 & 165.1303
(see note A)
Cable Area
Pipeline Areas
Fl Y 4s
Priv
Obstn
Fish Haven
(auth min 30 ft)
Sewer
Piles
Pipe
Submar Cble
Foul
Grs
Pilo
S P Sh
S Cy
Cy
M S
46'
45'
44'
43'
42'



18446

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

NOAA encourages users to submit inquiries, discrepancies or commer about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

18th Ed., Mar. 2011. Last Correction: 10/26/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)

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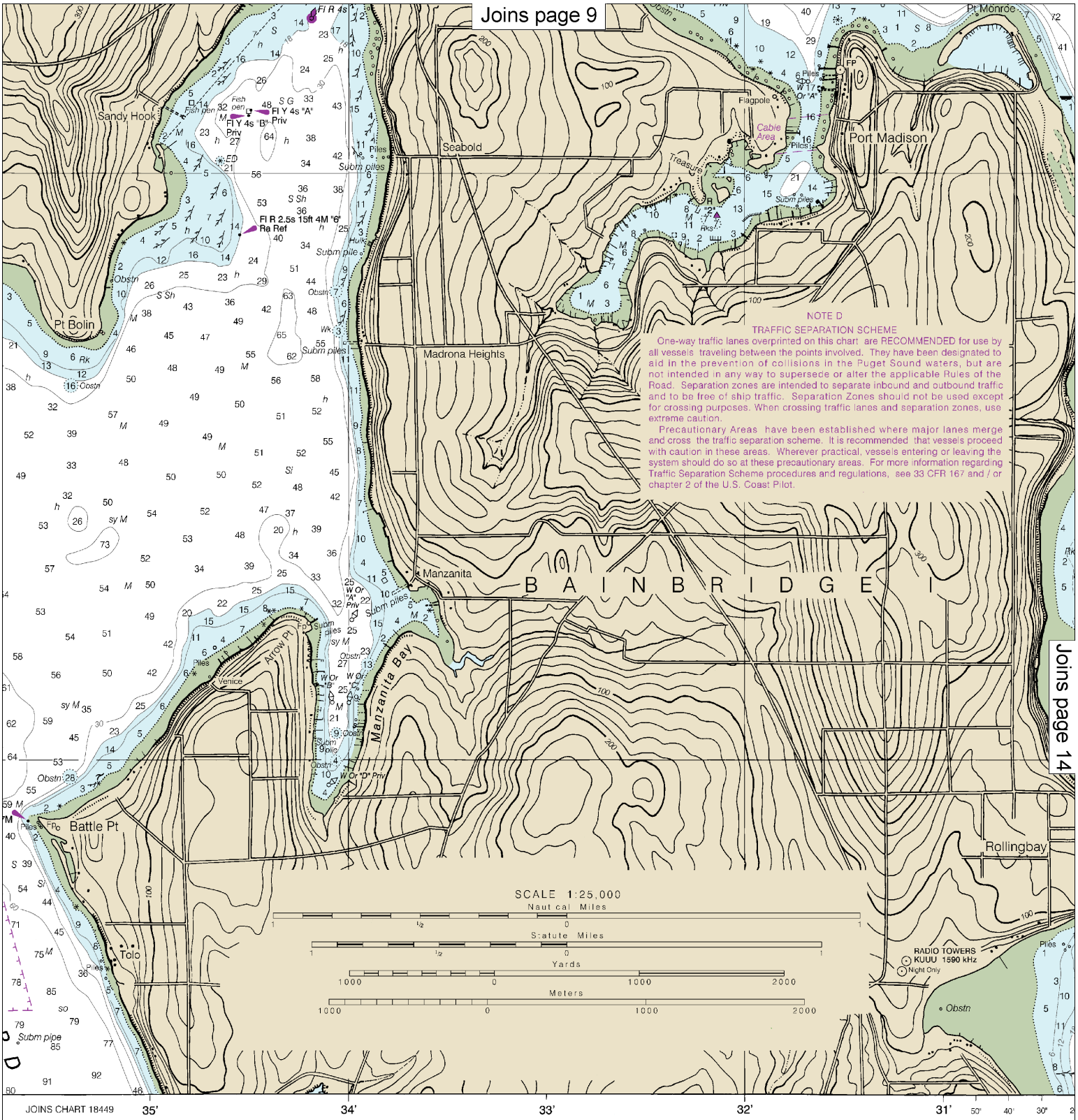
Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000



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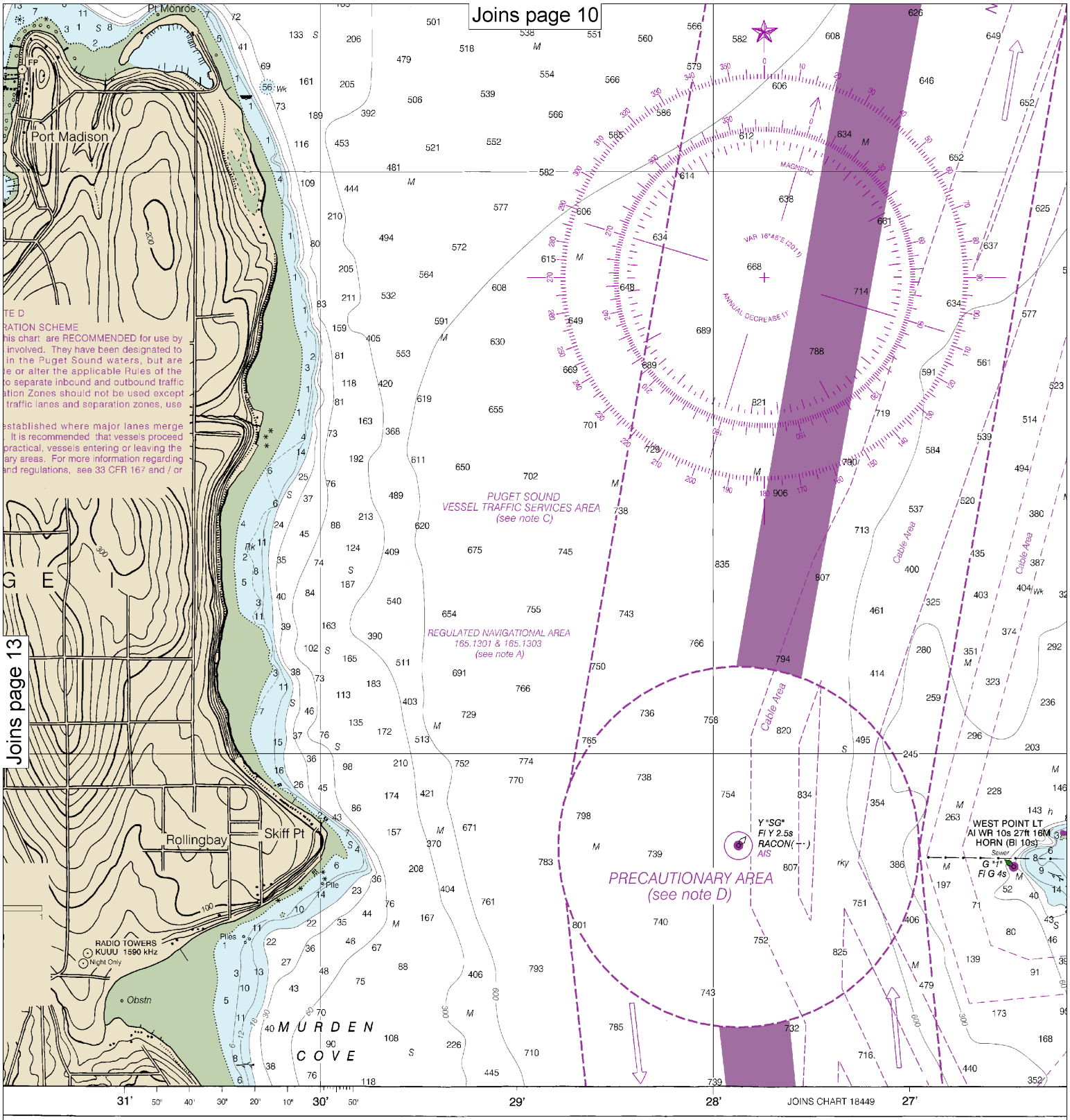
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINIST
NATIONAL OCEAN SERVICE
COAST SURVEY



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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOUNDINGS IN FEET

Note: Chart grid lines are aligned with true north.

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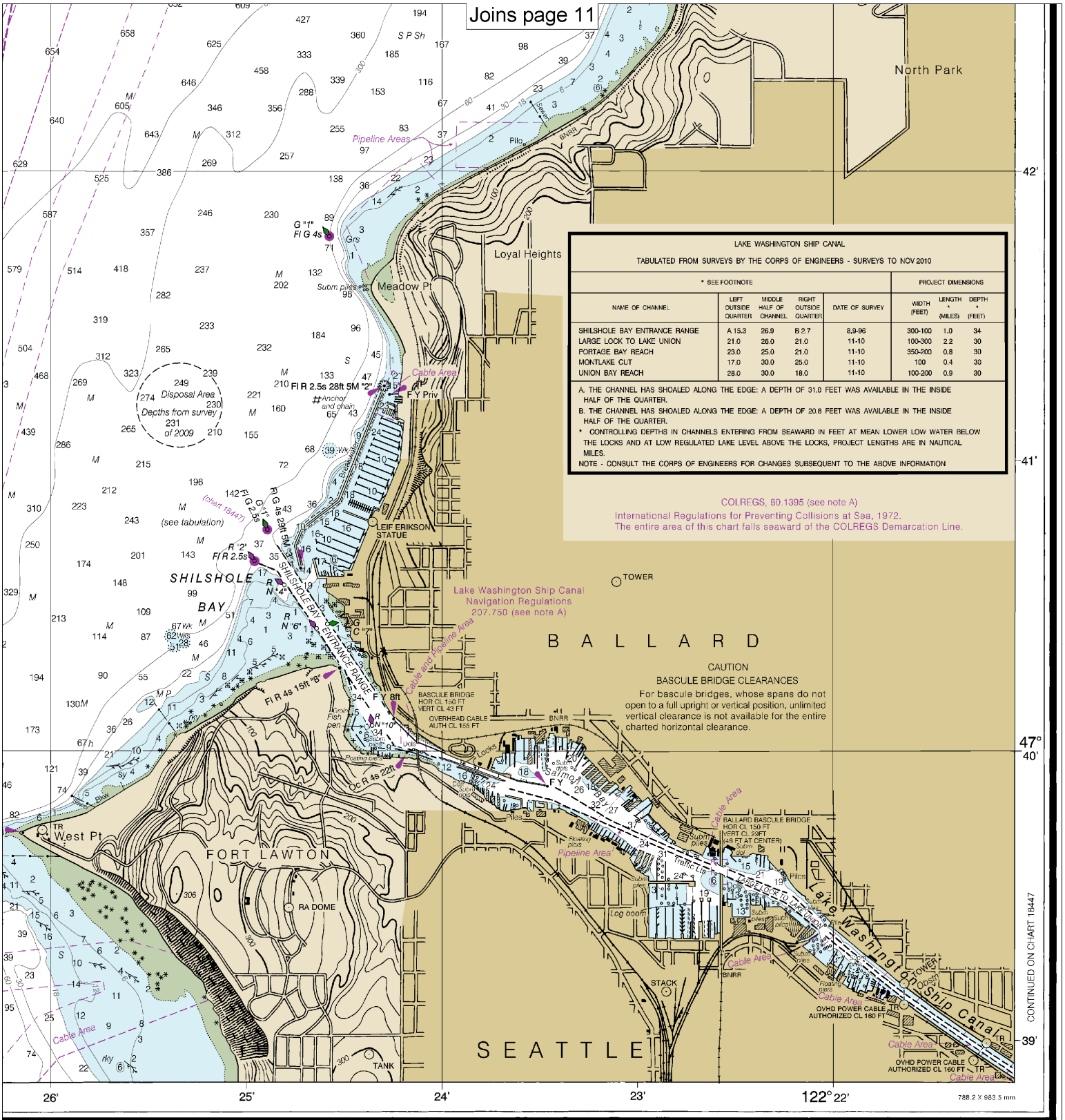
Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000



FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Apple Cove Pt to Keyport

SOUNDINGS IN FEET - SCALE 1:25,000

18446

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

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